

**REMARKS**

Reconsideration and withdrawal of the rejections set forth in the Office Action of April 29, 1998 are respectfully requested in view of the above amendments and the following remarks.

Submitted herewith is a request for an extension of time of three months accompanied by a check for the fee for same.

Claims 47-65, 72-74, 80-81, 88-95 and 105-114 remain under consideration in this application. Claims 47, 56, and 62-64 have been amended herein. Claims 66-71, 75-78, 82-87, and 96-104 have been cancelled. New Claims 105-114 have been added.

Claims 47, 53, 55-57, 60-61, 69-70, 72-81, 88, 90-91, 93, 96-102 and 104 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,758,883 to Kawahara et al. in view of an Eikonix press release and the Macintosh Systems Software User's Guide, Version 6.0. Claims 48-52, 54, 58-59, 62-68, 71, 82-84, 86-87, 89, 92, 94-95 and 103 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kawahara et al. in view of Eikonix and further in view of the Macintosh Systems Software User's Guide and U.S. Patent No. 5,018,017 to Sasaki et al. Finally, Claims 47-78 and 80-104 stand rejected under the judicially created doctrine of double patenting over Claims 1-18 of commonly assigned U.S. Patent No. 5,138,459 to Roberts et al. For the reasons set forth hereunder, each of these rejections is respectfully traversed.

A careful and extensive review of the cited art of record reveals that, as discussed in detail below, none of the cited references, either alone or in combination, teach or suggest

Applicants' claimed invention. Indeed, the references specifically teach away from the claimed invention, and, accordingly, the claims are believed to be patentably distinguishable over the cited art and are considered in condition for allowance.

As indicated above, Claims 47-104 stand rejected as being unpatentable over various combinations of Kawahara et al. in view of Eikonix, the Macintosh System User's Guide and Sasaki et al. Claims 66-71, 75-78, 82-87, and 96-104 have been cancelled. Accordingly, the Examiner's rejection of these cancelled claims on this statutory ground is deemed moot. Applicants' comments are, therefore, directed to the remaining claims including amended Claims 47, 56, and 62-64 and new Claims 105-114 to the extent the Examiner may consider the cited art and stated rejections relevant.

### The Invention

The independent claims of this application are directed to either an electronic camera or a translator, or processes employed therein. The camera claims recite a camera having the ability to format image data into an image data file format that is directly useable by an information handling device such as a personal computer (PC). Memory device formatting, which is distinct from data formatting, is not addressed by the pending independent claims.

One embodiment of the camera can format image data into an image data file format selected from one of a plurality of different data file formats respectively compatible with a like plurality of different information handling devices. This embodiment utilizes data format codes stored in a format memory in the camera for purposes of formatting image data.

In another embodiment as claimed in new Claims 105-114, computer operation codes (OP codes) are combined with the image data to provide the formatted data file. Tags indicating such things as the mode of operation of the camera can also be written into a header area of the data file as part of the formatting operation.

The independent translator claims are directed to a translator device wherein data on a first memory element can be formatted for use in an information handling device, and then stored on a second memory element. The first memory element can be an analog memory device and the second memory element can be a digital memory device useable in an information handling system.

#### The Kawahara et al. Reference

Kawahara et al. teaches and claims a digital camera (Fig. 5A) which is specifically and expressly designed for use with a dedicated, single purpose playback device (Figs. 9 and 10). To achieve this result, Kawahara et al. utilizes a bubble memory device 33/71 to transfer image data from the Kawahara et al. camera to the dedicated playback device. (Column 9, lines 48-50).

Significantly, Kawahara et al. teaches that it is undesirable to use circuitry or power within the camera to process data.

Also, by virtue of the fact that the image signals are stored in a storage medium by simply performing the color separation coding by coding compress means [DPCM 28 and 29] instead of processing the signals by a CPU and storing the signals, there is the effect of eliminating the need for a time corresponding to the processing time of the CPU, thus simplifying the circuit construction, reducing the power consumption, reducing the repetition period of successive shots and making rapid sequence shooting possible.

Kawahara et al. at column 12, lines 34-43.

Accordingly, Kawahara et al. teaches the shifting of data processing to the playback device for the purpose of simplifying circuit construction and reducing power consumption at the camera.

Thus, the present invention has the advantage of easily reducing the size and weight of a camera proper and the power consumption in that complicated processes can be assigned to the playback apparatus.

Kawahara et al. at column 11, lines 48-51.

#### The Eikonix Reference

The Eikonix reference comprises a two page press release dated September 29, 1988 directed to the introduction of new dedicated computer interfaces for use with Eikonix scanners. Like Kawahara et al., Eikonix teaches that processing should be performed by the playback device.

The Apple Macintosh II and IBM PS/2 interface packages both include a plug-in IEEE 488 interface board, cable and device driver.

Eikonix press release at page 1.

The Eikonix scanner thus uses an IEEE 488 cable to connect to a PC. As is well known by those skilled in the computer art, an IEEE 488 cable is typically used for connecting a "dumb" (non-intelligent) peripheral device to a PC. Such devices are controlled by the PC through the use of special driver software.

Here, the "dumb" peripheral is clearly the Eikonix scanner. For the use taught by Eikonix, a special interface board must be placed in a PC to receive the IEEE 488 cable. Different interface boards must, of course, be provided for incompatible PCs.

### The Macintosh Reference

The Macintosh Systems Software User's Guide, Version 6.0, provides instructions to users of Macintosh computers and the proprietary Macintosh operating system.

### The Sasaki et al. Reference

Sasaki et al. teaches the use of variable compression. Again, a dedicated playback device is utilized. Sasaki et al. discloses a digital camera which stores image data on a removable memory card 15. The image data is stored in data files having the specific format illustrated in Fig. 9E. These data files consist only of image data and a 256 byte header containing non-image data. The non-image data is just that - data and not computer operation code.

As disclosed by Sasaki et al., the non-image data is stored in a directory area of memory 15, which is separate from the stored image data file area. (Column 9, lines 40-42). This non-image data includes camera mode information, such as the method of data compression used. (Column 9, lines 42-61).

Image data stored on memory 15 is retrieved by inserting memory 15 into a dedicated single purpose reproducing unit 90 shown in Figure 11. Reproducing unit 90 converts stored image data to analog signals in a D/A converter 96 for display on a monitor or printing on a video printer (Column 11, lines 62-65; column 12, lines 61-65).

### The Laser Focus World Article

The article *Electronic Imaging* appearing in the *Laser Focus World* publication and cited in Applicants' Supplemental Information Disclosure Statement, filed concurrently herewith,

discloses an electronic camera having a removable memory card which contains digital images which may be displayed on a dedicated player or a personal computer via a card interface (see Fig. 2).

**Data Formatting Is Distinguishable From Memory Formatting**

With regard to Claim 47, it is respectfully asserted that the Examiner's rejection results from confusion between the concepts of data formatting and memory device formatting. As indicated above, each of Applicants' independent claims are specifically directed to data file formatting. Accordingly, the Examiner's reliance on the asserted disclosure of memory formatting in the cited art is believed neither relevant nor appropriate.

In support of the rejection of the remaining claims, the Examiner has characterized the Eikonix scanner as having the functionality to store data format codes for converting image data into IBM or Macintosh compatible files. Applicant respectfully submits that the Examiner's characterization is incorrect.

A careful review of the Eikonix article reveals that this reference specifically and expressly teaches that different types of dedicated Eikonix interface cards may be inserted into different types of computers to enable image data downloading. Any data formatting that may occur on the interface cards occurs in the computer. Specifically, Eikonix teaches changing the internal circuits of a computer to accept data output from a scanner.

Applicants' claimed invention, by contrast, teaches that the data output from the camera may be changed in the camera to conform to the data format of the computer. In this manner, the claimed invention eliminates the need for the dedicated interface boards required by Eikonix.

As is readily seen, the Eikonix reference not only fails to teach or suggest the selection of different output data formats as claimed by Applicants, it in fact teaches away from the claimed invention through its reliance on dedicated interface cards.

**The Examiner has Mischaracterized the Teachings of Kawahara et al. and Eikonix. The asserted combination does not follow.**

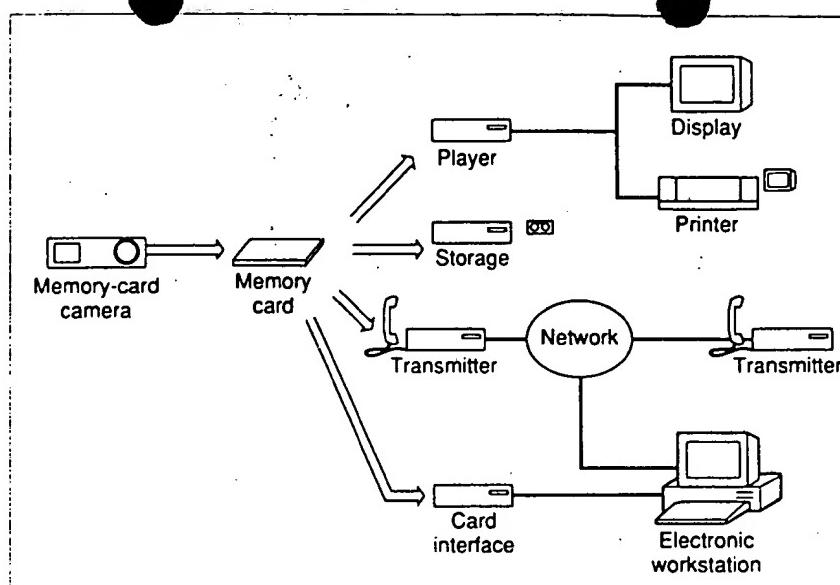
Applicants' respectfully submit that even if there were a teaching or suggestion for the asserted combination of Kawahara et al. and Eikonix, which there is not, the claimed invention nonetheless patentably distinguishes over such combination. As indicated above, Kawahara et al. teaches a digital camera for use with a dedicated, single purpose playback device. Because circuit complexity and power consumption resulting from data processing are believed undesirable, Kawahara et al. expressly teaches the shifting of data processing to the playback device to simplify camera design. As with Kawahara et al., Eikonix maintains processing in the playback device and specifically requires an interface card for use with the scanner.

Against this background it is respectfully submitted that the Examiner's assertion that the combination of Kawahara et al. and Eikonix in any way renders Applicants' claimed invention obvious is in error. The only logical combination, if any, resulting from the teachings of Kawahara et al. and Eikonix would be to use an Eikonix PC interface card, modified in view of the Kawahara et al. playback device, for transferring image data from the Kawahara et al. bubble memory device to a PC. In such case, image data formatting for use in the PC would be performed in the modified PC interface card, and not the Kawahara et al. camera.

It is further respectfully submitted that there would be no motivation in the art for replacing the bubble memory of the Kawahara et al. camera with a 3.5" floppy disk as suggested by the Examiner. Such modification would require extensive redesign of the Kawahara et al. camera, and would render the Kawahara et al. playback device useless. These undesired results could be avoided by simply providing an Eikonix PC interface card to read the Kawahara et al. bubble memory as is, without any modification to the Kawahara et al. camera.

Clearly, there is no teaching or suggestion in either the references or the art in general to support any other conclusion. Indeed, to incorporate data formatting functionality within the camera, as claimed by Applicants, runs contrary to the express teachings and purpose of Kawahara et al., which states as its goal the minimization of circuit complexity and the reduction of power consumption - all of which is taught to result from the processing of data in the player. Eikonix is in accord.

As support for Applicants' understanding of the art and its teachings, submitted concurrently with this response is the article *Electronic Imaging*, as it appeared in the publication *Laser Focus World*. As shown in the illustration of Figure 2, reproduced below, the only reasonable combination of the teachings of Kawahara et al. and Eikonix, if any, is the use of a removable memory card for playback on a PC via an interface.



*FIGURE 2. Memory cards in digital cameras are for temporary storage only. Users can transfer digitized pictures to displays or to permanent storage media.*

In view of the foregoing, it is respectfully submitted that the Examiner's rejection of the claims based on the asserted combination of Kawahara et al. and Eikonix is based on improper hindsight reconstruction and, in any event, is unsupported by the respective teachings of the cited art.

**There Is No Teaching Or Suggestion In The Art To Implement  
A Control Switch In the Camera of Kawahara et al.**

Applicants respectfully traverse the Examiner's assertion that one skilled in the art would "implement a control switch in the camera of Kawahara et al. in view of Eikonix in order to select an output data format." As indicated above, extensive review of the cited references reveals no support whatsoever for this assertion. To the contrary, and as indicated above, Eikonix neither teaches nor suggests the ability to select or change the format of the data output from the scanner via use of a format selection switch. Again, it is believed that the Examiner's assertions in this regard are based on improper and unsupported hindsight reconstruction.

Claim 47, as amended, recites an electronic camera having means for selecting one of a plurality of output data formats for use with a corresponding plurality of different information handling devices. In view of the above remarks, it is respectfully submitted that Claim 47, as amended, patentably distinguishes over the cited art and is in condition for allowance. The Examiner's rejection of this claim is respectfully requested to be withdrawn. Claims 48-55 depend from and include all the limitations of independent Claim 47. Accordingly, these claims are also believed to be in condition for allowance for the same reasons.

For the reasons indicated above, independent Claims 56 and 62 are also believed to patentably distinguish over the prior art. Claims 56 and 62 are in condition for allowance.

Claims 57-61 and 63-64 depend from and include all the limitations of independent Claims 56 and 62, respectively. Accordingly, these claims are also believed to be in condition for allowance for the reasons set forth above with respect to their parent independent claims.

**There Is No Teaching Or Suggestion In The Prior Art To Substitute A Video Tape In Place Of The Image Sensor CCD Of Kawahara et al.**

The Examiner has rejected Claim 72 based on his assertion that it would have been obvious to substitute a video tape in place of the image sensor CCD of Kawahara et al. Applicants respectfully disagree and traverse this rejection. Again, extensive and careful review of the prior art finds no such teaching or motivation for making the asserted substitution. Indeed, the Examiner expressly recognizes this in his rejection of Claim 47, in view of his assertion that the combined teaching of the references results in a camera meeting the limitations of Claim 47. It is respectfully submitted that having so argued in rejecting Claim 47, the Examiner is now

estopped to argue that the same combination results in a translator in rejecting Claim 72. In any event, Applicants find no such support in the cited references.

The Examiner's reliance on "official notice" of the mere existence of VHS tapes cannot, without further evidentiary support, provide the necessary teaching or motivation to substitute a VHS tape for the Kawahara et al. CCD. As discussed in Applicants' description of the prior art in the application, frame grabbers were available in the prior art to transfer images from an NTSC source (such as a VHS camcorder) to a PC. With such frame grabbers available, there would be no motivation in the prior to perform the VHS/CCD substitution proposed by the Examiner.

Accordingly, it is respectfully submitted that Claim 72 patentably distinguishes over the prior art and is in condition for allowance. Claims 73-74 depend from and include all the limitations of independent Claim 72 and are likewise believed to be in condition for allowance for the same reasons.

For the reasons stated above, Claim 80 is also believed to be in condition for allowance as is Claim 81 which depends from and includes all the limitations of independent Claim 80.

Claim 88 is also believed to patentably distinguish over the prior art and is in condition for allowance. Claims 90, 91 and 93 which depend therefrom and include all the limitations of independent Claim 88 are likewise believed to be in condition for allowance.

**The Examiner's Rejection Of Claim 50 Fails To Address The Recitation Of The Storage Of A Decompression Algorithm In The Memory Device And A Coded Mark Indicating The Algorithm Parameters To Be Utilized**

The storage of a decompression algorithm on a memory device is neither taught nor suggested by Sasaki et al. or any of the cited art of record. The Examiner's rejection of Claim 50 fails to take into consideration this recitation. Accordingly, Claim 50 is believed to patentably distinguish over the prior art.

Each of the remaining claims depends from and includes the limitations of an independent claim which is believed to patentably distinguish over the prior art. Accordingly, the remaining dependent claims are believed to be in condition for allowance.

**New Claims 105-114 Patentably Distinguish Over The Cited Art**

New Claims 105-109 are directed to a method for storing a digital image in a camera having a digital memory. The claims specifically recite data file formatting wherein such data files comprise both image data and computer operation code. As indicated above, none of the cited art of record teach or suggest Applicants' claimed file formatting process. At best, Sasaki et al. references the storage of image data in data files. As indicated above, however, these data files consist only of image data and a 256 byte header containing non-image data. There is no teaching or suggestion, express or implied, for the inclusion of computer operation code in a digital data file as claimed by Applicants.

Accordingly, to the extent the Examiner may consider the cited references relevant to new Claims 105-109, they are nonetheless considered to patentably distinguish over the art of record and are thus believed to be in condition for allowance.

Finally, Claims 110-114 are directed to an electronic camera operative to generate output data for use with a plurality of user-selectable information handling systems. Claim 110 is similar in scope to Claim 47 and, for the reasons stated above with regard to Claim 47, is therefore also believed to patentably distinguish over the cited references, to the extent the Examiner may consider them relevant. Accordingly, new Claims 110-114 are also believed to be in condition for allowance.

#### Claims Rejected Under The Doctrine Of Double Patenting

Claims 47-78 and 78-104 stand rejected under the judicially created doctrine of double-patenting. As indicated, Claims 66-71, 75-78, 82-87 and 96-104 have been cancelled. The Examiner's rejection of these claims on this statutory basis is therefore deemed moot. As to the remaining claims, although Applicants disagree with this ground of rejection, they will nonetheless submit a timely filed terminal disclaimer following receipt of an indication from the Examiner of allowable subject matter. The Examiner's rejection of double patenting will thus be obviated.

#### Conclusion

Applicants have made a bona fide attempt to address each of the Examiner's substantive grounds of rejection. The cited references have been carefully and extensively reviewed and arguments have been presented establishing the patentability of the claims. Accordingly, a notice of allowance is earnestly solicited.

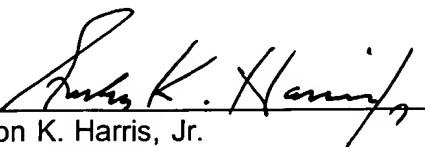
If the Examiner believes that a personal or telephonic interview will in any way assist him in his review of this response or expedite the allowance of this application, such a call is invited at the Examiner's earliest convenience.

Respectfully submitted,

Marc K. Roberts et al.

Date: October 29, 1998

By:

  
Gordon K. Harris, Jr.  
Reg. No. 28,615  
Attorney for Applicants

Harness, Dickey & Pierce, P.L.C.  
P.O. Box 828  
Bloomfield Hills, MI 48303  
(810) 641-1600

GKH/jmo